37. (Previously Amended) Apparatus as defined in claim 36 wherein said deflectable mounting structures support said frame on a track (18) structure which guides movement of said frame.

38. (Previously Amended) Apparatus as defined in claim 37 further comprising a deflectable seat (38, 36) cushion on said frame.

39. (Previously Added) Apparatus comprising:

a vehicle seat (30) frame having a bottom (32) portion and a back (34) portion which together bear a vehicle occupant weight load;

a support (18) structure which bears the entire weight of said frame and the entire magnitude of said occupant weight load, said support structure including a weight (22) sensor apparatus which measures said entire magnitude of said occupant weight load; and

a vehicle occupant protection device responsive to said weight sensor apparatus,

said support structure including a pair (54) of tracks which guide movement of said frame, said weight sensor apparatus comprising a plurality of weight sensor assemblies which measure portions of said occupant weight load acting on said tracks,

said weight sensor assemblies being operatively interposed between said frame and said tracks,

each of said weight sensor assemblies comprising a strain gauge mounted on a corresponding deflectable (20) portion of said support structure.

40. (Previously Amended) Apparatus as defined in claim 39 further comprising a deflectable seat cushion covering said bottom portion of said frame.

41. (Previously Added) A weight sensing apparatus for a vehicle seat comprising:

a plurality of sensors each including a mounting portion for attachment to a vehicle seat structure and a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure to generate a weight signal; and

a controller for receiving said weight signals from said sensors to determine seat occupant weight.

42. (Previously Added) An apparatus as in claim 41 including at least one strain gage mounted to said deflectable portion of each of said sensors.

43. (Previously Added) An apparatus as in claim 42 wherein said at least one strain gage is a plurality of strain gages mounted in a predetermined spaced relationship to each other on said deflectable portion.

44. (Previously Amended) An apparatus as in claim 42 wherein said seat structure is a seat pan.

45. (Previously Added) An apparatus as in claim 44 wherein each of said sensors includes a support portion mounted to a vehicle seat track member such that said deflectable portion is positioned between said mounting and support portions.

46. (Previously Added) An apparatus as in claim 44 wherein said seat pan is rectangular in shape defining four corners and said plurality of sensors is comprised of four sensors with one of said sensors mounted at each of said corners.

47. (Previously Added) An apparatus as in claim 41 including a safety restraint device controlled by said controller in response to seat occupant weight.

48. (Previously Added) An apparatus as in claim 47 wherein said safety restraint device is not deployed if seat occupant weight is below a predetermined weight.

49. (Previously Added) A method for determining seat occupant weight including the steps of:

mounting a plurality of sensors to a vehicle structure with each sensor including a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure;

generating a weight signal from each of the sensors in response to the deflection; and

determining seat occupant weight from the signals.

50. (Previously Added) A method as in claim 49 further comprising the step of controlling a safety restraint device based on the seat occupant weight.

51. (Previously Added) A method as in claim 50 further comprising the step of preventing deployment of the safety restraint device if the seat occupant weight is below a predetermined weight.

52. (Previously Added) A method as in claim 49 further comprising the step of determining a center of gravity of the seat occupant from the signals.

53. (Previously Added) A method as in claim 52 further comprising the step of controlling a safety restraint device based on the seat occupant weight and center of gravity.

54. (Previously Added) A method as in claim 49 further comprising the step of mounting a strain gage to the deflectable portion of each sensor.

55. (Previously Added) A method as in claim 49 wherein the seat structure is a seat pan and the method further comprises the step of mounting the sensors between the seat pan and a seat track assembly.

56. (Currently Amended) [An apparatus as in claim 45] A weight sensing apparatus for a vehicle seat comprising:

a plurality of sensors each including a mounting portion for attachment to a vehicle seat structure comprising a seat pan, a deflectable portion that deflects in response to a weight force applied to the vehicle seat structure to generate a weight signal, and a

support portion mounted to a vehicle seat track member such that said deflectable portion is positioned between said mounting and support portions;

a plurality of strain gages mounted to said deflectable portion of each of said sensors wherein said [at least one] plurality of strain [gage] gages comprises a first pair of strain gages diametrically opposite from each other and mounted directly to said deflectable portion at a first position and a second pair of strain gages diametrically opposite from each other and mounted directly to said deflectable portion at a section position spaced apart from said first position; and

a controller for receiving said weight signals from said sensors to determine seat occupant weight.

57. (Previously Added) An apparatus as in claim 56 wherein both of said first pair of strain gages are positioned between said second pair of strain gages on a common surface of said deflectable portion.

58. (Previously Added) An apparatus as in claim 42 wherein each of said sensors includes a sensor interface circuit mounted to said deflectable portion that develops a pulse width modulation signal indicative of the weight applied to said corresponding sensor.

59. (Previously Added) An apparatus as in claim 58 wherein said sensor interface circuit includes a pulse width modulation circuit and a two-stage signal amplifier for amplifying said pulse width modulation signal to a readable level.

60. (Previously Added) An apparatus as in claim 59 including a temperature control circuit for compensating for varying temperatures within the sensor interface circuit.

61. (Previously Added) An apparatus as in claim 42 wherein said controller calculates weight of an occupant by sampling the response of each of said sensors to a weight applied to said vehicle seat structure.

62. (Previously Added) An apparatus as in claim 61 wherein said controller samples said sensors approximately very thirty milliseconds.

63. (Previously Added) An apparatus as in claim 61 wherein said controller determines the weight by computing a biased average of each of said sensors over time and summing all of said biased averages together to obtain a total weight.

64. (Previously Added) An apparatus as in claim 62 wherein said controller determines occupant center of gravity based on measurements taken by said sensors and determines occupant position based on total weight and center of gravity.

65. (Previously Added) An apparatus as in claim 64 wherein said controller generates a correction factor based on said center of gravity and determines a corrected occupant weight by modifying said total weight by said correction factor.

66. (Previously Added) A method as in claim 54 including the steps of associating a sensor interface circuit with each sensor mounted to the deflectable portion and developing a pulse width modulation signal indicative of the weight applied to the corresponding sensor.

67. (Previously Added) A method as in claim 66 including the steps of providing the sensor interface circuit with a two-stage signal amplifier and amplifying the pulse width modulation signals for each sensor to a readable level.

68. (Previously Added) A method as in claim 67 including the step of providing the sensor interface circuit with a temperature control circuit for compensating for varying temperatures within the sensor interface circuit.

69. (Previously Added) A method as in claim 54 including the step of calculating weight of an occupant by sampling the response of each of the sensors to a weight applied to the vehicle seat structure.

62 = 70. (Previously Added) A method as in claim 69 including the step of sampling the sensors approximately very thirty milliseconds.

63 71. (Previously Added) A method as in claim 69 including the steps of determining the weight by computing a biased average of each of the sensors over time and summing all of the biased averages together to obtain a total weight.

64 72. (Previously Added) A method as in claim 71 including the steps of determining occupant center of gravity based on measurements taken by the sensors and determining occupant position based on total weight and center of gravity.

65 73. (Previously Added) A method as in claim 72 including the steps of generating a correction factor based on the center of gravity and determining a corrected occupant weight by modifying the total weight by the correction factor.